

Application No. 10/019,488
Reply dated January 19, 2005
Response to Office Action dated October 6, 2004

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 – 13. (Cancelled)

14. (Currently Amended) A gastight cell for the storage of electrochemical energy, comprising at least one positive nickel oxide electrode and at least one hydrogen-storing negative electrode, a hydrophilic separator being arranged between the positive and negative electrodes, with n positive electrodes and (n+1) negative electrodes, the two outmost electrodes being negative electrodes, which are each flanked by one transport element, and an alkaline electrolyte or an alkaline electrolyte mixture, wherein one or more negative electrodes are provided with a gas-permeable, hydrophobic transport element for transporting the gases of the cell atmosphere, and wherein all of the negative electrodes are hydrogen-storing negative electrodes.

15. (Cancelled).

16. (Currently Amended) A gastight cell for the storage of electrochemical energy, comprising a plurality of positive nickel oxide electrodes and hydrogen-storing negative electrodes, a hydrophilic separator being arranged between the positive and negative electrodes, and an alkaline electrolyte or an alkaline electrolyte mixture, wherein the positive and negative electrodes are alternately arranged and one or more negative electrodes are

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provided with a gas-permeable, hydrophobic transport element for transporting the gases of the cell atmosphere, and all of the negative electrodes are hydrogen-storing negative electrodes, and ~~The cell as claimed in claim 14, wherein the negative electrodes comprise split electrodes and unsplit electrodes, the split electrodes comprising one or more negative electrodes that are split into two parts, the two parts being separated from one another by a hydrophobic, gas-permeable transport element , and wherein every second negative electrode is split into two parts.~~

17. (Cancelled).

18. (Previously Presented) The cell as claimed in claim 16 , wherein the two parts of the split negative electrodes each have half the thickness or half the capacitance of one of the unsplit negative electrodes in the cell.

19. (Previously Presented) The cell as claimed in claim 14, wherein the transport element is a hydrophobic nonwoven layer.

20. (Previously Presented) The cell as claimed in claim 19, wherein the hydrophobic nonwoven layer comprises electrolyte-repelling polypropylene fibers.

21. (Previously Presented) The cell as claimed in claim 14, wherein the positive electrodes are fibrous-structure framework electrodes.

22. (Previously Presented) The cell as claimed in claim 14, wherein the separator comprises nonwoven polyamide fiber or hydrophilic nonwoven polypropylene fiber.

23. (Previously Presented) The cell as claimed in claim 14, wherein the at least one negative electrode comprises a metallic substrate material, to which an active compound is applied, the active compound being obtainable from a paste which comprises a dry fraction and a liquid fraction, the dry fraction comprising a mixture of a pulverulent storage alloy for hydrogen, soot and polytetrafluoroethylene (PTFE), and the liquid fraction comprising a mixture of water and an alcohol which has 3 to 6 C atoms.

24. (Previously Presented) The cell as claimed in claim 23, wherein the dry fraction comprising particles of the storage alloy being covered with polytetrafluoroethylene in the manner of fibrils.

25. (Previously Presented) The cell as claimed in claim 23, wherein the dry fraction comprises 85 to 95 parts of the alloy for storing hydrogen, 2 to 10 parts of soot and 3 to 8 parts of PTFE.

26. (Previously Presented) The cell as claimed in claim 23, wherein the liquid fraction contains 30 to 70 parts by volume of water and 70 to 30 parts by volume of the alcohol.

27. (Previously Presented) The cell as claimed in claim 23, wherein the dry fraction further comprises 0.2% by weight of polyethylene glycol.

28. (Previously Presented) The cell as claimed in claim 23, wherein the liquid fraction comprises polyethylene glycol.

29. (Previously Presented) The cell as claimed in claim 23, wherein the dry fraction and the liquid fraction has a mass ratio of 4:1 to 6:1.

30. (Currently Amended) A gastight cell for the storage of electrochemical energy, comprising at least one positive nickel oxide electrode and at least one hydrogen-storing negative electrode, a hydrophilic separator being arranged between the positive and negative electrodes, and an alkaline electrolyte or an alkaline electrolyte mixture, wherein one or more negative electrodes are provided with a gas-permeable, hydrophobic transport element for transporting the gases of the cell atmosphere, and wherein none of the electrodes are auxiliary electrodes, the two outmost electrodes being negative electrodes, which are each flanked by one transport element..

31. (Currently Amended) A gastight cell for the storage of electrochemical energy, comprising:

a plurality of electrodes consisting essentially of

one or more positive nickel oxide electrodes, and

two ~~one~~ or more hydrogen-storing negative electrodes;

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a hydrophilic separator arranged between each of the positive and negative electrodes; and

an alkaline electrolyte or an alkaline electrolyte mixture,

wherein one or more negative electrodes are provided with a gas-permeable, hydrophobic transport element for transporting the gases of the cell atmosphere, the two outmost electrodes being negative electrodes, which are each flanked by one transport element.